

WHAT IS CLAIMED IS:

1           1. A method for determining the time of transmission of a message packet  
2   from a network device including a plurality of transmit queues, said method comprising the  
3   steps of:

4           disabling a selected transmit queue to flush all packets from the selected  
5   transmit queue;

6           placing the message packet in the selected transmit queue;  
7           disabling all other transmit queues;  
8           waiting a selected time interval sufficiently long for all other transmit queues  
9   to be flushed;

10          transmitting the message packet from the selected transmit queue; and  
11          measuring time of transmission of the message packet from the selected  
12   transmit queue.

1           2. The method of claim 1 where the steps of transmitting and measuring  
2   further comprise:

3           reading and saving a base time of a local clock and a first timer value of a  
4   timer residing on the network device;

5           reading a second timer value of the timer and transmitting the message packet;  
6   and

7           calculating the time of transmission from the base time and first and second  
8   timer values.

1           3. The method of claim 1 where the message packet is a SYNC message  
2   utilized in the PTP.

1           4. The method of claim 1 further comprising the step of:

2           sending a follow up packet including the time of transmission of the message  
3   packet.

1           5. A system for determining the time of transmission of a message packet  
2   from a network device including a plurality of transmit queues, said system comprising:  
3           means for disabling a selected transmit queue to flush all packets from the  
4   selected transmit queue;

5 means for placing the message packet in the selected transmit queue;  
6 means for disabling all other transmit queues;  
7 means for waiting a selected time interval sufficiently long for all other  
8 transmit queues to be flushed;  
9 means for transmitting the message packet from the selected transmit queue;  
10 and  
11 means for measuring time of transmission of the message packet from the  
12 selected transmit queue.

1 6. The system of claim 5 where the means for transmitting and measuring  
2 further comprise:  
3 means for reading and saving a base time of a local clock and a first timer  
4 value of a timer residing on the network device; and  
5 means for reading a second timer value of the timer and transmitting the  
6 message packet; and  
7 means for calculating the time of transmission from the base time and first and  
8 second timer values.

1 7. The system of claim 5 where the message packet is a SYNC message  
2 utilized in the PTP.

1 8. The system of claim 5 further comprising:  
2 means for sending a follow up packet including the time of transmission of the  
3 message packet.

1 9. A computer program product executed by a processor for determining the  
2 time of transmission of a message packet from a network device including a plurality of  
3 transmit queues, said computer program product comprising:  
4 a computer usable medium having computer readable program code physically  
5 embodied therein, said computer program product further comprising:  
6 computer readable program code executed by the processor for disabling a  
7 selected transmit queue to flush all packets from the selected transmit queue;  
8 computer readable program code executed by the processor for placing the  
9 message packet in the selected transmit queue;

10 computer readable program code executed by the processor for disabling all  
11 other transmit queues;  
12 computer readable program code executed by the processor for waiting a  
13 selected time interval sufficiently long for all other transmit queues to be flushed;  
14 computer readable program code executed by the processor for transmitting  
15 the message packet from the selected transmit queue; and  
16 computer readable program code executed by the processor for measuring  
17 time of transmission of the message packet from the selected transmit queue.

1 10. The computer program product of claim 9 where the computer readable  
2 program code executed by the processor for transmitting and measuring further comprises:  
3 computer readable program code executed by the processor for reading and  
4 saving a base time of a local clock and a first timer value of a timer residing on the network  
5 device;  
6 computer readable program code executed by the processor for reading a  
7 second timer value of the timer and transmitting the message packet; and  
8 computer readable program code executed by the processor for calculating the  
9 time of transmission from the base time and first and second timer values.

1 11. The computer program product of claim 9 where the message packet is a  
2 SYNC message utilized in the PTP.

1 12. The computer program product of claim 9 further comprising:  
2 computer readable program code executed by the processor for sending a  
3 follow up packet including the time of transmission of the message packet.